

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: David F. Gavin
Craig Waldron
Robert J. Martin
George A. Polson

Docket: 101792-200

Serial No.: N/A

Art Unit: N/A

Filed:

Examiner: N/A

Title:

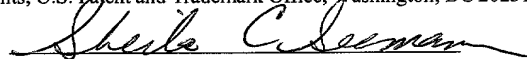
COMPOSITE BIOCIDAL PARTICLES

Certificate of Mailing

Date of Deposit February 15, 2002.

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Signed:



Name: Sheila C. Seemann

PRELIMINARY AMENDMENT FILED WITH APPLICATION

Commissioner for Patents
U.S. Patent and Trademark Office
Washington, DC 20231

Dear Sir:

In the matter of the above-identified application for Letters Patent filed herewith, please enter and consider the following Amendment and Remarks:

AMENDMENT

In the Specification:

At page 1, line 3, please insert:

CROSS-REFERENCE TO RELATED APPLICATION

This application is a division of U.S. Patent Application 09/120,664, filed July 22, 1998, the disclosure of which application is incorporated by reference in its entirety herein.

In the Claims:

Please cancel claims 1 and 38 without prejudice or disclaimer.

Please amend claims 2, 3, 33 and 35 to read as follows:

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2. (Amended) A biocidal composition comprising composite particles, each of said composite particles containing a shell and a core, said core comprising a metal or a metal-containing compound wherein the metal is a moiety selected from the group consisting of zinc, copper, bismuth, silver, zirconium, and combinations thereof, and said shell comprising a pyrrithione adduct comprising the reaction product of pyrrithione with a portion of said core metal or metal compound, wherein said core comprises surface oxidized copper powder or a copper-containing compound selected from the group consisting of cuprous oxide, copper hydroxide, copper containing salt(s), and combinations thereof.

3. (Amended) The composition of claim 2 which is produced by reacting a copper compound selected from the group consisting of cuprous sulfide, copper thiocyanate, and combinations thereof, with a pyrrithione compound selected from the group consisting of pyrrithione acid, ammonium pyrrithione, tert-butylamine pyrrithione, calcium pyrrithione, dithiobis (pyridine-N-oxide), a magnesium salt adduct of dithiobis (pyridine-N-oxide) and combinations thereof, and sodium pyrrithione, potassium pyrrithione, lithium pyrrithione, and combinations thereof, to cause transchelation of said pyrrithione compound to copper pyrrithione.

33. (Amended) A method of forming the composition of claim 2 which comprises reacting relatively water insoluble copper powder or a copper salt with a relatively more water soluble pyrrithione compound in a transchelation reaction.

35. (Amended) The composition of claim 2 wherein the core material is copper I oxide and the coating material is copper II pyrrithione.

REMARKS

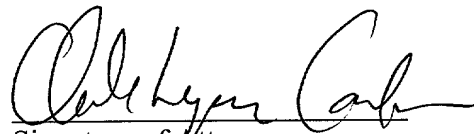
By this Amendment, claims 2, 3, 33 and 35 have been amended, claims 1 and 38 have been canceled. Claims 2-37 and claim 39 are presented for examination. No new matter has been added. By this Amendment, claims 1 and 2 were combined into new claim 2 and claims 3, 33 and 35 have been amended to change dependency from claim 1 to claim 2.

Applicant submits that the application is now in condition for allowance. Therefore, the Examiner is respectfully requested to take such proper actions so that a patent will issue herefrom as soon as possible.

If the Examiner has any questions or believes that a discussion with Applicant's attorney would expedite prosecution, the Examiner is invited and encouraged to contact the undersigned at the telephone number below.

Please apply any credits or charge any deficiencies to our Deposit Account No. 23-1665.

Respectfully submitted,
David F. Gavin, et al.



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2. (Amended) A biocidal composition comprising composite particles, each of said composite particles containing a shell and a core, said core comprising a metal or a metal-containing compound wherein the metal is a moiety selected from the group consisting of zinc, copper, bismuth, silver, zirconium, and combinations thereof, and said shell comprising a pyrithione adduct comprising the reaction product of pyrithione with a portion of said core metal or metal compound, [The composition of claim 1] wherein said core comprises surface oxidized copper powder or a copper-containing compound selected from the group consisting of cuprous oxide, copper hydroxide, copper containing salt(s), and combinations thereof.

3. (Amended) The composition of claim [1] 2 which is produced by reacting a copper compound selected from the group consisting of cuprous sulfide, copper thiocyanate, and combinations thereof, with a pyrithione compound selected from the group consisting of pyrithione acid, ammonium pyrithione, tert-butylamine pyrithione, calcium pyrithione, dithiobis (pyridine-N-oxide), a magnesium salt adduct of dithiobis (pyridine-N-oxide) and combinations thereof, and sodium pyrithione, potassium pyrithione, lithium pyrithione, and combinations thereof, to cause transchelation of said pyrithione compound to copper pyrithione.

33. A method of forming the composition of claim [1] 2 which comprises reacting relatively water insoluble copper powder or a copper salt with a relatively more water soluble pyrithione compound in a transchelation reaction.

35. The composition of claim [1] 2 wherein the core material is copper I oxide and the coating material is copper II pyrithione.